Chapter 4 explored the idea that reality may be an interactive process leading to the stage of time and space rather than set on it, and – perhaps more speculatively – that there may be a role for us as observers in the process of causing reality to unfold. The last chapter investigated synchronicity and noted that there is an apparent overlap between phenomena, such as quantum entanglement and our experience of meaningful coincidences. Now Chapter 6 picks up the thread from Chapter 4 and asks why, if reality is a process, it does not appear random. What is the mechanism by which it appears stable to us, as a continuous stream of events?

Reality as a stable process

Sarah asked Alex Wendt how reality may be kept in place: So, if I visualise this: less than having a probability wave collapsing into a single point, it seems more like it is ‘touching upon’ the wave that results in an experience. The Zeno-effect may be a mechanism to keep that experience in place, as long as you continue to touch upon the wave by making your observation.66

Alex: I know Henry Stapp has written on this a fair bit. My understanding of the Zeno-effect is that if you keep making the same measurement you will keep getting the same result. So it is not probabilistic any more. I have thought about how that translates to social science. In the social context that might be manifested in institutions, such as the governance of a state through the separation and balance of legislator, judiciary and executive powers. Or an institution like marriage: if people keep

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66 The Zeno-effect is the quantum property that once an observation has been made and reality has taken a certain form, this form is maintained and carried forward as long as the observer continues to observe. See Lexicon.
getting married, in a sense those are constant measurements, Zeno-effects. That is what keeps the institution basically stable and alive. So in that sense the Zeno-effect is very interesting to me.

But I like what you just said, your image of the wave function sort of getting ‘touched’. The external world is touching it basically, producing a kind of conscious ‘flashes’.

Sarah: If it is a ‘touching upon’ the wave, it doesn’t have to make the whole thing collapse. Because if you make the whole thing collapse, it sounds as if it then disappears. And that makes absolutely no sense to me.

Alex: Right, that is right. You have the collapse and then it just stops. There is no story about how it gets put back together for the next observation to take place.

They returned to it later in the conversation, in relation to Ton’s point about reification.

Sarah: Reification sounds to me like it is a way to help us keeping Zeno-effects stable.

Alex: Yes. That is exactly what I wanted to say: reification and the Zeno-effect are conjoint.

Sarah: In that sense, mass is only one possible expression of information. If you express, or ‘reify’ information into objects or meaning or consciousness and then keep them in place, it is a Zeno-effect. A way of keeping reality stable.

**Directionality in reality**

So, the suggestion is that it may be another phenomenon from quantum mechanics that is keeping reality stable, the so-called Zeno-effect. The Zeno-effect is the phenomenon that once an observation has been made and reality has taken a certain form, this form is maintained and carried forward as long as observations continue to be made in fast enough succession. But it does not explain why reality has evolved to be as complex as it
appears to us. Erik Verlinde explained that from his perspective, reality increasing in complexity is inevitable, a side effect of the way reality is structured.

Erik: People often mistake information for meaning. They think information is something that must be useful. You know, like the intelligence spies collect: they are expected to provide useful information that can be used to track the movements of enemy governments, and the like. Also, people tend to assume that you don’t know anything about information you don’t have.

In physics we have a more absolute idea of what information is. When I think about all the molecules in this room, I really don’t want to know what each individual one is doing but I can still provide a measure of how much information I would need to describe them. That is what information is to us: a measure of the amount of information. Even if that information is not useful to me and I don’t use it, I can still give it a number. So, the sort of information we think about in relation to black holes or the way we calculate gravity in my latest paper is information that is present in the space itself. It is not useful in and of itself, but we can measure it. So, a room with more particles in it has more information than a room with fewer particles. But it is a different sort of information than you will find in the newspaper, for instance.

Sarah: The way you are talking about it reminds me of something Ton and I have talked about a lot: if you have maximum entropy, in a certain sense you have maximal possibilities, because nothing has yet taken shape. As the entropy decreases, like when information takes on shape, you have fewer possibilities but greater complexity...

Erik: That’s right. It relates to what I think about how we have structures and things in the universe... Luckily, we don’t have a maximally entropic situation. So, for example, one of the things

67 Another example of language sometimes confusing matters more than clarifying them.
I calculate is that when there is a mass in a specific location, rather than distributed evenly over space, it has less information than when...

Sarah: So the information is decreasing?

Erik: It decreases. Structure arises because of complexity... you have entropy decreasing, but indeed you do get complexity in its place.

Sarah: So, would I be right in saying that there is a counterpart to the entropic force in nature, and that it is for nature to organise itself. Is that fair?

Erik: Yes, I think that is fair. I think it is inevitable in a system with a great number of degrees of freedom. It always leads to some form of organisation.

Ultimately, I think it's the Gaussian distribution. If you have lots of something, most of it will be in the centre of the distribution, and there will be nothing to see. But what is in the tail of the distribution is lots of wondrous stuff that looks nothing like equilibrium. And the universe is so complex, that all sorts of things arise. Most of it is not interesting, but the things that are interesting are in the tail of the distribution. That is why I think in physics, we have only focused on the things in the tail. We see less than 1% of the universe. Our world is constructed of the things we find interesting, but most of it we don't find interesting and we ignore. We have dark energy in the universe, that is more than 70% of what there is, and we do nothing with it! 70% of the energy, and we ignore it, it's not interesting to us. But that is where most of the entropy is.

I think chaotic systems often give rise to self-reproducing patterns, related to the fact that when certain things grow, other things become smaller. So, when you consider space, and all its possibilities, there are areas you are attracted to. In a chaotic system, you get these nooks where things can reproduce and continue. One example is turbulence in a liquid: moving liquid will stream evenly until it gets caught in a corner, and then you see all sorts of things happening. What you always get in the corners of a system with liquid flowing is swirls – you've seen
them, like water running down a drain – and those patterns are very interesting to look at. Then when I consider weather patterns, which is actually a very similar system, you see these same sorts of swirls in weather systems. And when you consider the red spot on Jupiter, it is actually a self-perpetuating storm that has been there for millions of years. And then, when I put pictures of our galaxy next to those... they are very similar.

But those storms only arise because of everything that is going on around them! You don't see that part, that airflow is invisible in weather photographs, but it somehow produces the storm. I think the same thing is happening in space. We only see the galaxies, but around them there is this huge system that we don't pay attention to, that we don't see.

Ton: That is so interesting! You are talking about matter, but I see the same thing with my clients. They only see the storms that are going on, and not all the stuff around them.

Sarah & Ton discussed the possibility that the direction in which reality unfolds may not be random with Alex too. He said the following:

If the natural social metaphor for the classical world view is that the state of nature is atomistic, mechanical, then we are all completely separable. In a quantum world, we are not completely separable, so it makes much more sense to think of it as having a formative tendency. Because it is a single thing.

Ton: There is also the very down-to-earth argument that if nature did not have a formative, teleological tendency then nothing would ever exist for at least a while. Because everything would be entropic or random or nothing.

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68 Term borrowed from Carl Rogers. See also note 36 and Lexicon.
69 This text follows Thomas Nagel’s assertion that teleology means an inherent tendency towards greater complexity, but does not necessarily require a ‘creator’ or other outside force to assert this tendency.
Alex: That goes back to the quantum coherence idea, because that is what resists entropy basically. In my view, that is the basis of life. Have you come across the phrase ‘directed mutation’? There are quantum biologists who are saying in natural selection the mutations are not random. They are directed. Again, that is an example of a formative tendency. They argue that all organisms are constantly trying to adapt their forms purposively to deal with disruptive pressures in the environment. And it is funny, even in the quantum physics case, they always say that what is going on in the particle chamber is all random. Well, not necessarily. It looks random from the outside but from the inside, but maybe, if it is a panpsychic world, it is not random at all.

Ton: It is probabilistic but with a bias towards forming something.

Alex: That is the way to put it yes. I do think that nature has an ordering tendency. One of the big problems in biology for instance is that proteins can take on zillions of shapes, so how do they end up in the particular shapes that they do? Computationally it is completely intractable. Nobody has any clue. But quantum people are coming along and saying ‘Actually, we can explain this!’

Ton: There comes a point when a teleological explanation is much simpler and becomes preferable.

Alex: Yes. I think the anti-teleology of the modern world is really a legacy of this classical mechanistic Newtonian framework that excludes it. So, if you go back to a more organicist picture of the world, teleological reasoning is much more plausible.

Sarah: In talking about how reality is formed, I really like the image of the ‘foam’ on the ‘ocean’ of possibilities where actualisation takes place. But what I miss in that description is the

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70 Quantum coherence is the phenomenon that if the waves describing a quantum system are in phase, this allows the system to remain in superposition.
71 See the book mentioned earlier by Jim Al-Khalili and Joe McFadden, Life on the Edge, where they discuss this idea.
72 Refers to the discussion on David Bohm’s work in Chapter 4.
notion of a formative tendency. Things are not popping in and out randomly. It has directionality. There is pattern formation, like strings weaving together, which gives direction to it.

Alex: Yes. Some people argue that the purpose of evolution is to increase freedom – in general – by creating more complex organisms that have more free choice, more free will. Whitehead said that nature is about increasing freedom. I find that a very attractive view.

Sarah: Freedom for the organism. The possibilities for the organism grow while cutting down the entropic possibilities in the 'ocean' that surrounds it. That means the external probability goes down, so there is a balance.

Ton linked the tendency of reality to unfold in a certain direction to meaning. He said: I think reality possesses a tendency to not remain the same, but instead to form itself, to gain meaning, to become more complex, to create a more complex whole. I think that is what we usually call ‘meaning’.

Sarah: Are you saying that meaning is in fact the development of direction and choice?

Ton: Direction? Perhaps, less randomness anyway. I think of this formative process as a ‘funnel’ where possibilities bundle up. First there is this state of maximum possibilities in chaos, entropy. From there on, possibilities bundle together to form a concentrate, a rock or a person, for example, or an emotion. In the case of a person I mean the whole package that comes with it, inner experiences and material body.

Sarah: The image of the funnel triggered my memory of an image that my 13-year old nephew brought up once. He was writing about his family for a school project he had at the time. His family history is pretty complex. His father is from Africa and

73 Alfred North Whitehead was the founder of process philosophy, the idea that reality is a series of events (occasions), where objects are merely events that are stable over time. It was an attempt to get away from Cartesian dualism and his ideas have overlap with the concepts discussed in this book.
his mother from Europe. He found out that one of his ancestors killed relatives of the other, so that was very complicated for him. But he created a wonderful image of his family tree with lines that converged in him as a person and then diffused into the future, like a funnel.

Ton: Beautiful. I think the accumulation of possibilities that develops, in part due to your own choices, is the meaning that you give to your life. Meaning includes your past experiences and is a source of future possibilities. I think the word meaning could be taken to describe any accumulation of possibilities. So, when two atoms combine into a molecule and thereby create new possibilities, that is just as much a form of meaning as when an emotion and a thought combine into behaviour. In both cases, possibilities accumulate.

This process does not necessarily run in a gradual, linear manner. Nature is full of examples of how entropy is sometimes stronger and fuels the process and it leads to more significance than would have been possible before. For example, a forest fire is often a necessary step in the rejuvenating process for the forest as a whole. Similarly, in human development, allowing some chaos may be a way to get rid of a habit or an emotion that has become a dead-end street. In such cases, a sudden increase of entropy provides a source of possibilities from which, if we manage to stay sufficiently composed during the process, we can start anew. What seems to matter, is a healthy balance between entropy and the formative tendency. So, if handled well, entropy may indirectly contribute to more meaning.

Henry Stapp noted that the direction of change in reality seems not only to be towards more complexity, but even towards a better experience for the observer, whether or not by design.

Henry: The question is why does nature choose to answer a question with yes and not no? At this point, I deviate from Von Neumann's orthodox theory. According to Von Neumann, nature's choice is random. There is no reason why nature chooses
one option above the other. Einstein said: ‘God does not play dice’, but according to strict quantum mechanics, God *does* play dice with the universe. However, I am with Einstein in believing that God does not act without a reason. In other words, I adopt the principle of sufficient reason, that nature has a reason to choose one outcome above the other. It allows you to understand otherwise inexplicable phenomena, these acts at a distance, instantaneous actions, entanglement, some of the more unorthodox aspects of quantum mechanics.

Nature is in the driver’s seat and has to choose one outcome or the other. It has to choose between you are going to have this or that experience. So, it is *nature* making the choice. Nature itself – just like us – has its values and they happen to be in favour of the human experience being positive. But that may be just one way of looking at it. Alternatively, the fact that an experience is positive and pleasurable has to do with something else, some structure that nature is actually aiming for. Nature’s aim may actually be a more abstract form that happens to often correspond to increased pleasure versus pain. So, I haven’t worked any of this out in detail, but I am saying that it is not just random. There is something entering into nature’s choice and that means God is not playing dice with the universe – or that he is playing with loaded dice. That might be a better way of putting it.

Ton: So, your message is that there is directionality in nature, and that nature is choosing in favour of us...

Henry: What I said was that there seems to be empirical evidence that nature is responding to you in ways that are intrinsically positive. Nature wants to be beneficial. From the point of view of quantum mechanics there seems to be this idea that there is an input into your life from something like a cosmic force because an observer is required for reality to form. And it seems like this cosmic input wants your life to be happy, pleasant and that you don’t have to fight this alone, nature is on your side. I think many religious people gain comfort just from the belief that God is somehow trying to help you out and it is a beneficial thing, not something negative.
Ton: What about entropy in nature? You are describing a positive tendency, but obviously there is also a destructive counter-force. How do you view that?

Henry: Well entropy has to do with the amount of structure. Entropy is just a matter of how random it is, or how structured it is. The degree of deviation from randomness. It is a tendency on the part of nature to make things less and less structured. Everything gets washed out and structure disappears. Whereas what we have been talking about before, would be a tendency of nature that countervails the law of entropy. A tendency that is adding more and more structure.

I am not saying that or suggesting that nature’s choice is designed to necessarily oppose entropy, but I am saying that that is the effect of it. Because the random choice will tend to make it less and less structured. Because if something is equally possible to be this or that, and then the actualisation follows that law, then you will have a general destructuring tendency (laughs). But if there is something trying to make people happy... well, happiness has more structure than randomness...

Herman Wijffels noted that the tendency towards ever-increasing complexity means we are entering a new phase of global awareness.

Herman: I feel that in this era, we are dealing with global awareness for the first time in history. It has been strongly facilitated by technology. The Internet and the media that are connected by it form the infrastructure for this global awareness. It means that there are many more manifestations of connection than before. For example, you could say that the refugee crisis is a direct consequence of it...

Ton: How?

Herman: Well, people in Africa, living in relative poverty compared to us, have mobile phones too. They know what it is like here. So they think, why should I stay where I am? They trek to Europe, thinking they will fit in one way or another. It
is a whole new phase in our evolution, including economically: the globalisation of the economy is a result of global awareness. It makes perfect sense: if you are a businessman and they can produce your products more cheaply in China, you have them made in China. It’s good for the Chinese too, because it brings some of the Western wealth their way.

Sarah: We talked about a greater awareness that we are all part of, but also about individual consciousness, our having a sense of self. Are you saying we need to depart from that sense of individuality, the sense of ‘I’ and instead move more towards a sense of collective consciousness? Of ‘us as a society’ or even ‘the world’?

Herman: Yes, that is exactly what I am saying. As far as I am concerned, that change in our perception is a condition for the survival of our species. I think we have come to a stage in the evolution of life on this planet, and of our human evolution, where we can only survive if we operate and work and view life from collectiveness. That is where we are.

It translates into individual consciousness in two ways: the first is, you need to be aware of it. The second is that the question being asked of every one of us is: what is my contribution to this process? How do my possibilities, my talents, my process of actualisation contribute to this transition? That is the stage we are at.

Sarah: Individual development as a societal responsibility.

Herman: Of course! Just look at it historically: the developments in the industrial era led us to emancipation. Emancipation is one of the most important results of the industrial age. But what is emancipation? It is a higher level of awareness of your own individuality. You become more aware that you are an individual. To some people that is still the goal of their personal development. However, the next logical step is that you connect to the whole from your own individuality. That you contribute to the functioning of the whole. That is where we are now. What is necessary is to broaden our consciousness. Rilke put it beautifully when he said: ‘Ich lebe mein Leben in wachsenden Ringen’;
I live my life in ever-widening circles. That is what we need to do now.

**Awareness as an inherent feature of reality**

Above, Herman talks about our responsibility to contribute to the process of increasing complexity in reality. But clearly, we are part of that reality. What is our consciousness and how does it relate to this complexity? As noted in Chapter 2, consciousness is one of the phenomena that our atomistic, deterministic paradigm has not yet been able to explain. In the conversations included in this book, many of us leaned towards a more panpsychic outlook, the idea that awareness may be an inherent aspect of reality. There is also the question whether conscious observation is necessary in quantum physics, and of whether these two issues are related in any way. In talking to Alex:

Ton: On the one hand your book has a very panpsychic feel to it and on the other hand in some places you say things that seem dualistic, like: a rock has no consciousness, only systems with quantum coherence have consciousness. What do you really think?

Alex: While I was writing that chapter, I was very aware of the fact that the sceptics are all going to say: ‘So you are saying rocks are conscious?’ I did not want to go that far. I want to say rocks are not conscious, even though some philosophers believe they are. So, I wanted to have a more traditional view, in which anything that is inanimate, not alive, cannot be conscious. Anything that is alive is conscious. That is how I would divide it. Really it is a very traditional approach.

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74 Rainer Rilke was a German-language poet. His poem *Ich lebe mein Leben in Wachsenden Ringen* was included his 1899 collection of poems *Das Stundenbuch* (The Book of Hours).
Ton: But then we don’t have a very clear definition of what life is.

Alex: Well, we do now. I believe quantum coherence is a necessary condition for life. Consciousness is inherent to life. Consciousness is based on quantum coherence, life is based on quantum coherence. Rocks do not exhibit quantum coherence so they cannot be conscious. And so each individual particle inside a rock is going to do its own thing, collapsing or whatever, the rock’s stability is held together by other forces, classical forces I guess. But not quantum forces, because it is not alive and so doesn’t have coherence.

Ton: Okay, you are advocating limited panpsychism then.

Alex: It is limited in the sense that I am saying that not all macroscopic objects are conscious. At the microscopic level, awareness\(^75\) is pervasive, or at least there is potential for it to be. But then you get this split between living things that maintain quantum coherence and have some sort of consciousness, and the non-living things that don’t.

Sarah: In your book there is this image of an atom coming into and out of existence which does imply some level of awareness, however limited. Why would that not translate to the level of the rock of which these atoms are a part?

Alex: That is a good question. My gut instinct is that the experiences that atoms are having of their universe are fleeting. They just disappear.

Sarah: Come in, come out.

Alex: They come in, come out, it is a constant flux. But because there is no coherence structure around those atoms their experiences are not preserved in memory and do not lead to a sense of self.

Sarah: That description of quantum coherence makes it sound equivalent to the Zeno-effect. So as long as you have this coherence you can keep on making the same observation which

\(^75\) Alex used the term ‘consciousness’ in the context of awareness. Changed for consistency.
translates into something like memory which enables a sense of self that is continuous over time.

Alex: So, the Zeno-effect is crucial for the consolidation and maintenance of...

Sarah: ... a sense of self...

Alex: ... a sense of self. That is really interesting.

Sarah: So, within a rock there are little flashes of awareness all the time that don't map out into a longer pervasive sense of consciousness over time.

Alex: Right, that is the idea, right. Yes.

Sarah: I think that what happens when you touch the probability wave is 'dual aspect': the material aspect is that an atom appears, a flash of awareness is the other aspect. They are two aspects of the same experience. But you need the Zeno-effect to have a continuous sense of awareness and that is what atoms lack.

Ton: So ‘Zeno-ing’ is also a continuum, you can have a very small Zeno and a very big Zeno?

Sarah: Well, atoms I guess have Zeno for as long as they are atoms and then they flash out of existence.

Ton: So, they are Zeno-ing in short bursts? Compared to humans for instance?

Sarah: Compared to humans, yes. So an atom goes 'bloop!' and that was a Zeno, and our Zeno spans 80 years or more on a good day.

The nature of individual consciousness

But if our individual consciousness is based on our individual string of observations, and it is this continuous string of observations that gives rise to our sense of an outer world, as well as our sense of self, then how do we interact with each other? It only makes sense if our individual consciousness is part of a

76 Relates to neutral monism that is sometimes also called Dual Aspect Theory.
greater consciousness, perhaps the more global awareness we talked about with Herman and Herma. In talking to Erik, Sarah put it like this:

When I started thinking about consciousness, one of the first things I did was to write a paper about the relationship between it and the brain. One of the conclusions I came to is that what our brain and senses do is to filter. We can only detect a limited spectrum of electromagnetic radiation (visible light), a limited range of sound waves, and the same argument can be made for all our senses. The information from our senses is then brought together in our brain. Then when you look in the brain there are all sorts of mechanisms in place to limit the amount of information that is carried forward. That brought me to my hypothesis that it might be the goal of brain function to create a limited consciousness, a sense of self as unique from the surroundings, thereby enabling us to interact with a complex and rapidly changing environment.

Erik: I think that is a wonderful way of describing it, and it relates to what I was saying about some information being important while some isn’t. In deciding what is important you somehow create individual consciousness. I have used a similar
idea in lectures sometimes that the way we humans think about nature is mostly about forgotten information. When a physicist tries to find a single equation to describe everything, he doesn’t realise what he is doing. What he is actually doing is trying to reduce the very complex to a tiny little part of it. We people are very good at that, but it is always about reducing information.

Sometimes people ask me why nature can be described by equations so well. Well, it’s because we humans are trained to reduce information. It’s what humans do: We are continuously trying to find the essence by reducing the information available to us.

In talking to Ton, Sarah said: My hypothesis is that there are two types of consciousness. A universal form of consciousness and a subset of that, which is the sense of being a unique individual, distinct from others. I think that is the limitation we impose upon ourselves. Our senses limit the amount of information we perceive, meaning we can only perceive a subset of reality. That may be necessary for us to have the sense of being here, in the here and now, in order to live a life as a person in a seemingly fairly solid 3D world, with objects in it (bangs on the table). Objects that are built up of particles, that in turn are built out of particles that turn out not to be particles at all, but probability waves up until when you measure them. It seems to me that that is an illusion that we apparently need. So, I think that the sense of being someone, having the experience of being an individual, is part of the same illusion that leads to us perceiving the table as a solid object that makes a sound if I bang it.

Ton: But does that mean it is an incomplete observation? Do you feel the observation is incomplete? Is that what caused your childhood questions?

Sarah: Yes, I think it’s an illusion, and it shows around the edges. I think if you came here, into this life, into this body in a 3D world with time as a nice linear phenomenon running straight through it, then you would have no reason to question
it, no drive to actualise, to understand more. For me, it is the fact that there are these unanswered questions – life, the nature of consciousness – and these non-sequiturs, such as in quantum mechanics, these ‘cracks’ in the nature of reality that make me want to question what is going on.

**Integrating old wisdom into new thinking: the nature of greater consciousness**

So, Sarah is suggesting that our individual consciousness may be part of a greater one. This is hardly a new idea, it is found in many religions such as Hinduism and Buddhism. Furthermore, several consciousness researchers have similarly suggested that consciousness (or awareness at least) may be an inherent feature of reality. Henry said the following:

If you know anything about Indian philosophies, Hindu in particular, they have something called *jivas*. There is the godhead, the sleeping, slumbering god, something that persists forever. Then, according to Hindu ideas, sparks partially disconnect from the whole and connect to a body. They become partially disconnected from the great godhead. In their way of thinking, you as an entity have two parts. There is your mental part, which seems to be separate in some sense from your bodily part. If you imagine the two disconnected, you can imagine yourself floating up into space, you can imagine that your body has decayed and has gone somewhere, but you still think of yourself as a mental thing that does not need the body anymore. The idea is not total nonsense. I mean, you can imagine it, you can think about it, and it is part of what made Descartes talk about mind and matter.

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77 These include David Chalmers, mentioned in Chapter 2 and Christoph Koch, President of the Allen Institute for Brain Science, for example.
I think bodies are basically a way for the mind to have better communication with other minds. In other words, there is this material world that is a little more structured and stable and... We have no idea what these mental entities are doing, floating around up there, without bodies.

Ton: So their purpose is to communicate better?

Henry: Yes, with each other. You know, in most religions there is some reason behind it all and we have fates and karmas and things to work out. I have never been religious, but on the other hand I do feel that I am here for the purpose of doing what I am doing.

Ton: So do I.

Henry: I have the sense that I have a purpose and that somehow that purpose is expressed through my body, and that it connects to something that is more permanent, more enduring, that goes on and that has some sort of a reason that we don't know about yet.

Ton: I have come around to the idea that the world with you and me in it seems to be at work to convert entropic energy into more stable, more bundled, controlled energy. It seems it may be working towards more significance, more meaning, instead of chaos.

Herma van der Weide said the following about how our experiences may connect to a greater consciousness: in Jungian psychology, there is an axis in your psyche that connects the self to the collective. So, in principle, you can know everything. You are connected to all knowledge and it can present itself to you through images. Your mind translates the archetypes from the collective to images that fit you. The same topic will present itself to different people differently, according to their personal development, the culture they grow up in, etc. Each individual will translate topics from the collective into their own terms.

Ton: And it is a natural reflex for us to say it’s just suggestion, or that we are imagining things.
Herma: That’s the beauty of it: imagining things is transforming primal energy into consciousness. It happens through images.

Ton: Well, I meant that people suggest it is all just fancy. There is a push to prove it, to demonstrate it scientifically somehow. Don’t you get that sort of reaction?

Herma: No, not really. When you work with individual people, the images they receive are very meaningful to them. They say things like: ‘How on earth did this happen? I made it up, yet it makes perfect sense!’ But their spouse, or somebody else might question it, simply because it does not have the same meaning for them.

Ton: So are these ideas incompatible with classical, empirical science? Are the two paradigms incompatible?

Sarah: They might appear to be incompatible at a first glance. But I think things are shifting. We are moving towards an interactive paradigm, where they will turn out not to be incompatible after all.

Herma: Exactly. I wouldn’t go so far as to say that all contemporary science is merely positivistic, but the very nature of what we currently need is that it can’t be shown scientifically, because the way it manifests differs between individuals. The principle lies in the mysterious, and, well, we don’t belong there.

Herman: Not yet, but it is where we are from.

Sarah: Is that the outcome of the evolutionary process that you refer to, Herman, that ultimately, in the end, we will all be ‘enlightened’, that we will return to a collective consciousness?

Herman: I consider that to be a possible destination of life. Alpha and omega, if you will: alpha, that we are experiencing an expansion of awareness in matter and that it will contract to a new consciousness, omega.

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78 The idea that knowledge can only be derived from natural phenomena.
Wilber\textsuperscript{79} speaks about ‘transcend and include’. That is very important: to take what was important in an earlier phase, but transcend it and add new value to it. Really, it has been our experience that personal growth is no more than actualising the potential you represent, but that includes integrating the way in which you see the world.

This final chapter has gone back to the suggestion from Chapter 4 that reality may be a process and asked why such a process would be stable, and not random. We have speculated that another quantum phenomenon (the Zeno-effect) may play a role and that there may be an inherent tendency towards more complexity in all aspects of reality (a force countering entropy, if you will). Perhaps even more speculatively, some of the participants wondered whether awareness may not be an inherent aspect of reality and whether our individual consciousness (our sense of self) may then not be the result of that inherent awareness through brain function.

To be clear, the dialogues recorded here were (sometimes wildly) speculative and paint no more than an outline of the new paradigm we may be shifting towards. The final chapter will summarise the main points of what was said.

\textsuperscript{79} Kenneth Wilber is an American thinker who developed a theory on the nature of reality (Integral theory). His ideas on spiritual development emphasize building on what has already been achieved, by ‘transcending and including’ it in the next development.